

REMARKS

Summary of Office Action

Claims 1-10 were pending in the above-identified patent application.

The Examiner has requested information under 37 C.F.R. § 1.105.

The Examiner has rejected claims 1-5 and 7-10 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claims 1-5 and 7-10 are also rejected under 35 U.S.C. § 103(a) as being unpatentable over Vrij et al. "People's insight into their own behaviour and speech content while lying." British Journal of Psychology. London: May 2001, Vol. 92 Part 2, page 373 (hereinafter "Vrij") in view of Johnson, JR. U.S. Patent Application Publication No. 2002/0062089 (hereinafter "Johnson") in view of Barboza "Smith Barney agrees to Settle Bond Charges for \$2 Million." New York Times (Late Edition (East Coast)). New York, N.Y., September 24, 1997, page D. 10 (hereinafter "Barboza").

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Vrij in view of Barboza in view of Weber et al. U.S. Patent No. 5,564,005 (hereinafter "Weber").

Applicant's Reply to the Requirement under 37 C.F.R § 1.105 and Telephonic Interview Summary

The Examiner has requested information under 37 C.F.R. § 1.105. In particular, the Examiner stated that the information is required to identify publications embodying applicant's claimed subject matter.

The Examiner cited an article originally published in Barron's Magazine, dated June 24, 2006, entitled, "Is Your CEO Lying" (hereinafter "the article"). The article is about behavioral analyses of public figures, including corporate executives, performed by Business Intelligence Advisors

("BIA"), the assignee of this application. The article refers to a video of an April 2001 CNBC interview with a corporate executive who was later investigated and charged with securities fraud. The Examiner cited a portion of the article that states that BIA began using this video in the "spring of 2001."*

In response to this article, the Examiner has requested a) any known publications, brochures, manuals and press releases that describe BIA's services and/or products that were subject of the article including any material that describes analyzing a corporate disclosure for verbal and non-verbal deceptive behavior analysis and b) the names and descriptions of any products or services that have incorporated the claimed subject matter as of and subsequent to April 2001.

Responsive to this requirement, applicant submitted an Information Disclosure Statement on July 31, 2008, listing known and readily available publications, brochures, manuals and press releases that describe BIA's services and/or products that were subject of the article including any material that describe analyzing a corporate disclosure for verbal and non-verbal deceptive behavior analysis. This listing included known and readily available descriptions of any products or services that incorporate the claimed subject matter for the time period beginning with the Spring of 2001 and continuing through February, 5, 2002, pursuant to the Examiner's request.

In addition, the Examiner cited a letter from Security Training Inc. ("STI"), provided within the applicant's submission, dated February 26, 2002 (hereinafter

* Applicant wishes to point out that this video was used internally during the spring of 2001. During that time period, the video was not used as part of any products or services embodying applicants' claimed subject matter.

"the letter"). The letter refers to an STI training program entitled "Deceptive Behavior Detection and Strategic Elicitation," and states that the program "was the focus of our recent introductory session in New York." The Examiner further cited the course description enclosed with the letter that lists Philip R. Houston, the inventor of the instant application, as an expert.

In response to this letter, the Examiner has requested a) that the applicant provide the nature of the relationship of STI and BIA, b) all course materials, written and video, (not just promotional excerpts) and the dates of all courses relating to deceptive behavior detection that were conducted prior to February 26, 2002 and c) any training materials that were used to train financial, human resources, auditing and other key professionals to detect deceptive behavior, as described in the letter.

Responsive to the Examiner's request, applicant submits that Security Training Inc. was the previous name of BIA, and as such, STI and BIA are a single entity. Applicant further submits that the request for information under 37 C.F.R § 1.105 has been satisfied as follows.

Telephonic Interview Summary

On February 4, 2009, a telephonic interview took place between Examiner Gabrielle McCormick, Supervisory Examiner John G. Weiss, and the undersigned. The undersigned wishes to thank the Examiners for the courtesies extended during the telephonic interview.

During the telephonic interview, undersigned and the Examiners discussed the 37 C.F.R § 1.105 request for information. In particular, the Examiner clarified that the request for pertinent documents and materials is inclusive of the period beginning with the Spring of 2001 and continuing

through February, 5, 2002, a year before the priority date of the instant application.

Responsive to this requirement, applicant submits that the above referenced Information Disclosure Statement, submitted on July 31, 2008, includes all known and readily available documents and materials describing any product or service that incorporates the claimed subject matter for the time period beginning with the Spring of 2001 and continuing through February, 5, 2002. Insofar as applicant is required to "submit information already known but there is no requirement to search for information that is unknown" (MPEP § 704.12(b)), and insofar as applicant is "expected to make a reasonable inquiry under the circumstances to find the factual information requested (37 CFR 10.18(b)(2))" (MPEP § 704.11), applicant submits that the foregoing is a complete reply to the requirement under 37 C.F.R. § 1.105.

Applicant's Reply to the 35 U.S.C. § 101 Rejection

The Examiner rejected claims 1-5 and 7-10 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. In the interest of expediting the prosecution of the present application, and without conceding the issue of patentability, applicant has amended independent claim 1 to more clearly recite particular apparatus elements that accomplish the claimed method steps. In particular, applicant has amended claim 1 to include a display and an annotator. Applicant respectfully submits that claim 1, as amended, is fully supported by the original specification.

Accordingly, for at least this reason, applicant respectfully requests that the rejection of amended independent claim 1 under 35 U.S.C. § 101 be withdrawn. Additionally, for at least the reason that claims 2-5 and 7-10 are dependent from independent claim 1, applicant respectfully

requests that the rejection of claims 2-5 and 7-10 under 35 U.S.C. § 101 also be withdrawn.

Applicant's Reply to the Prior Art Rejection

Applicant has amended independent claims 1 and 6, as well as dependent claims 3 and 7-10, to more particularly define the invention. These amendments do not add new matter and are fully supported by the original specification. Support for these claims can be found, for example, in paragraphs 9, 10, and 27 of applicant's specification.

Applicant's amended independent claims 1 and 6 are directed toward *inter alia* a method and system for analyzing a corporate disclosure made by a representative to determine clusters of deceptive behaviors. After a record of the disclosure is received and displayed, the record is reviewed to determine the presence of a cluster of two or more deceptive behaviors of the representative that are responsive to a stimulus and that occur within a time interval determined by the beginning of the stimulus and a pre-determined period of time after the end of the stimulus. The record is then annotated to indicate the presence of the cluster of deceptive behaviors, including each deceptive behavior and the number of deceptive behaviors within the cluster.

For example, applicant's amended independent claim 1 provides a systematic approach for analyzing corporate disclosures for the presence of a cluster of deceptive behaviors. This systematic approach includes identifying a stimulus (e.g., a question) within a record of the disclosure and determining whether there is a cluster of two or more deceptive behaviors (e.g., a group of specifically defined verbal and non-verbal behaviors) that are responsive to the stimulus and that occur within a time interval determined by the beginning of the stimulus and a pre-determined period of time after the end of the stimulus (e.g., five seconds after

the end of the stimulus). Reviewing the disclosure in this manner provides an objective measure (i.e., the number of deceptive behaviors in the cluster) of a level of deception in the corporate disclosure with respect to a particular stimulus. This systematic approach can be used to analyze an entire corporate disclosure by measuring a level of deception for each stimulus within the disclosure.

To make out a *prima facie* case of obviousness, the cited references must teach or suggest all the claim limitations of the rejected claim (MPEP § 2143). However, taken alone or in combination neither Vrij nor Johnson nor Barboza shows or suggests all of the features recited by applicant's independent claim 1. Similarly, neither Vrij nor Barboza nor Weber shows or suggests all of the features recited by applicant's independent claim 6. Thus, the rejections under 35 U.S.C. § 103(a) should be withdrawn.

- A. The Combination of Vrij and Johnson does not Show or Suggest Determining Deceptive Behaviors Responsive to a Stimulus that Occur within a Time Interval Determined by the Beginning of the Stimulus and a Predetermined Period of Time After the End of the Stimulus

The Examiner contends that Vrij refers to determining deceptive behaviors that are responsive to a stimulus and that occur within a certain time interval. Vrij refers to an experiment described in the British Journal of Psychology that examined "participants' insight into their own behavior and speech content while lying" (Vrij, page 1, ¶ 1). The participants were shown a video and instructed that they would be interviewed twice about the subject material shown in the video. In one interview the participants were requested to lie and in the other they were requested to tell the truth (Vrij, page 2, ¶ 3). As part of the experiment, two observers reviewed videotapes of the interviews and coded the behavior

of the participants (Vrij, page 3, ¶ 6). In addition, two raters reviewed transcripts of the interviews and scored the interviews using the Criteria-Based Content Analysis (CBCA) method, which assesses the credibility of statements by determining the presence of certain criteria (Vrij, page 4, ¶ 10). The coded behaviors and scored interviews were then compared to questionnaires completed by the participants concerning their beliefs about their own behavior during the interviews (Vrij, page 4, ¶ 9). The results measured the differences between participants' expectations of their own speech and behavior and their actual speech and behavior.

In support of the Examiner's contention that Vrij refers to determining deceptive behaviors that occur within a certain time interval, the Examiner cites Vrij's discussion of "Cohen's kappas" which "typically show to what extent raters agree among each other whether or not an observed variable (verbal criterion) was present or not in a certain time interval" (Vrij, page 4, ¶ 11). While the Examiner admits that Vrij does not discuss when this "certain time interval" occurs, the Examiner alleges that Johnson discusses detecting deception during a time interval determined by the beginning of the stimulus and a predetermined period of time after the end of the stimulus.

Johnson refers to a method of determining deception in a subject's response to stimuli. Specifically, Johnson refers to analyzing a subject's electrophysical activity, including event-related brain potential ("ERP"), and behavioral activity, including response time and response accuracy, to detect deception. Johnson's method includes providing a stimulus to a subject and requesting the subject to "make a speeded discriminative response to the relevant and/or irrelevant stimuli by designating each item as relevant or irrelevant as quickly as possible" (Johnson, page 8, ¶ 104). The subject's response is thus confined to one of two possible answers and "is typically relayed by pressing a

button" (*Id.*). Deception is determined, in Johnson, by collecting the subject's response, response time, and brain activity "following each stimulus" and comparing the information to a baseline of information previously collected in response to control stimuli (Johnson, page 8, ¶ 104, page 10, ¶ 131, page 17, ¶ 196). In Johnson, it is the comparison of an identified behavior with other, previously recorded, behaviors that forms the basis for determining deception.

The Examiner supports the contention that Johnson discusses detecting deception during a time interval determined by the beginning of the stimulus and a predetermined period of time after the end of the stimulus, by citing Johnson's discussion of using "the time of the subject's response on each trial as the reference point for aligning the single-trial ERP waveforms, usually to some arbitrary time point" (Johnson, page 5, ¶ 87). In addition, the Examiner cites Johnson as referring to using a time interval "linked to the time of the onset of the stimulus, e.g. from a short time before (baseline) to 1-2sec after the stimulus" (Johnson, page 8, ¶ 111). As a result, the Examiner contends that it would have been obvious to combine Vrij's time interval with Johnson's reference point in order to show collecting deception data beginning with the stimulus onset until a period of time after the conclusion of the stimulus.

Applicant respectfully submits, however, that the combination of Vrij and Johnson does not show or suggest determining deceptive behaviors that are responsive to a stimulus and that occur within a time interval determined by the beginning of the stimulus and a predetermined period of time after the end of the stimulus, as required by applicant's claims. Neither Vrij nor the CBCA method referred to by Vrij use the systematic approach for analyzing corporate disclosures recited by applicant's claims. Instead, Vrij discusses simply identifying "for each rater whether or not

they indicated that the criterion was present in the written transcript of each participant" (Vrij, page 4, ¶ 11) In other words, Vrij looks for the presence of credibility criteria in each participant's entire statement irrespective of a stimulus or an amount of time between the stimulus and the deceptive behavior. Applicant's claimed approach greatly enhances deception detection capabilities by clearly linking the deceptive response to the stimulus.

Furthermore, applicant respectfully submits that even if Vrij is combined with Johnson, the combination would still not show detecting deceptive behaviors occurring within a time interval determined by the beginning of the stimulus and a predetermined period of time after the end of the stimulus, as required by applicant's amended claims. In particular, Johnson's discussion of using a time interval concerns ERP waveforms, which are monitored directly from the brain, and not observable behaviors. Rather, when it comes to observable behaviors, Johnson refers to collecting information "following each stimulus," and not, as applicant claims, during a time interval inclusive of the stimulus (Johnson, page 8, ¶ 104). Thus, the combination of Vrij and Johnson does not show or suggest all of the elements of applicant's amended independent claims.

Finally, applicant notes that neither Vrij nor Johnson are directed to the claimed subject matter. Instead, as discussed above, Vrij codes a participant's behavior in order to compare the information to a participant's expectation of his or her own speech and behavior while lying. Johnson compares an identified behavior with previously recorded baseline behaviors in order to determine deception in responses confined to one of two possible answers. Neither Vrij nor Johnson discuss applying their respective experimental methods to deception detection outside a controlled environment. The applicant's approach, on the other hand, provides targeted deception analysis to each

stimulus within a corporate disclosure made by a representative, wherein a comparison with previously collected behaviors of the representative is not required.

B. Vrij does not Show or Suggest Determining the Presence of a Cluster of Deceptive Behaviors and Determining the Number of Deceptive Behaviors within a Cluster

The Examiner alleges that Vrij shows a cluster of deceptive behaviors and counting the number of deceptive behaviors, citing Vrij's discussion of identifying credibility criteria associated with each of a subject's answers provided in a transcript (Vrij, page 4, ¶ 10). Applicant respectfully submits, however, that Vrij does not show or suggest determining a cluster of deceptive behaviors and determining the number of deceptive behaviors within the cluster, as required by applicant's independent claims. Merely identifying multiple criteria associated with an answer, as Vrij discusses, does not show or suggest that the criteria can be grouped together as a cluster of deceptive behaviors. In contrast, each of the deceptive behaviors in the cluster of applicant's independent claims 1 and 6 are responsive to the stimulus and occur within a time interval determined by the beginning of the stimulus and a predetermined period of time after the end of the stimulus. In this way, each of the deceptive behaviors in the cluster are linked to the stimulus in a particular and systematic way.

Furthermore, instead of quantifying the number of behaviors in a cluster of deceptive behaviors associated with a particular stimulus, Vrij discusses calculating for each of an enumerated list of independently graded criteria the number of answers in which the criteria was identified and producing a total score "per interview" (Vrij, page 5, ¶ 2). As such, Vrij provides an indication of the number of times a criteria was identified within an entire transcript, but does not

associate that number with a particular stimulus or cluster, as specified in applicant's claimed invention. Moreover, Vrij does not allow for the same criteria to be identified within an answer more than once (*Id.*). According to applicant's approach, deceptive behaviors can be grouped into clusters and quantified to produce superior deception analysis on a stimulus by stimulus basis.

C. The Combination of Vrij and Barboza does not Show or Suggest Analyzing a Corporate Disclosure

The Examiner alleges that Barboza refers to studying the behaviors of financial managers and the need to detect deception in the financial world. Barboza is a newspaper article about a settlement that a brokerage firm made with the SEC, after it failed to properly supervise an employee in the underwriting of a municipal bond issue. The Bank hired a consultant to review some of its procedures in an attempt to prevent a similar occurrence. The Examiner believes that it would be obvious to combine Vrij and Barboza in order to understand "the correlation of lying to behaviors as it relates to financial managers for the purpose of detecting and preventing fraud" (Office Action, page 7).

Applicant respectfully submits, however, that the combination of Vrij and Barboza does not show or suggest analyzing a corporate disclosure. There is nothing in Barboza that relates in any way to analysis of corporate disclosures for the purpose of identifying deceptive behaviors of a representative, wherein the disclosure is related to the financial performance of an entity associated with the representative. As a result, it is not obvious to combine Vrij and Barboza to show the applicant's claimed invention.

In addition, applicants respectfully submit that, in making this rejection, the Examiner appears to be applying impermissible hindsight, which is disallowed by MPEP § 2141.01(III). In establishing the motivation for a

rejection under 35 U.S.C. § 103(a), "the examiner must step backward in time" and "[i]n view of all factual information, the examiner must then make a determination whether the claimed invention 'as a whole' would have been obvious at that time" (MPEP § 2142). The combination proposed by the Examiner in the instant case would require one of ordinary skill in the art at the time of applicant's invention to apply the circumstances of Barboza's improperly supervised employee to the results of Vrij's experiment, which was directed to examining participants' expectations of their own speech and behavior while lying, in order to suggest analyzing a corporate disclosure for deceptive behaviors. Applicants respectfully submit that "[combining] prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight" (In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999)). Accordingly, applicants respectfully submit that the Examiner has failed to establish sufficient motivation for one of ordinary skill in the art to make the suggested combination.

D. The Combination of Vrij and Weber does not Show
or Suggest Using an Annotator to Indicate the
Presence of a Cluster of Deceptive Behaviors
Within a Corporate Disclosure

The Examiner alleges that Weber refers to the annotation of recorded events in a business domain. Weber refers to a system for entering and storing user information about an event and correlating that information with recorded event data. As such, the Examiner believes that it would be obvious to combine Vrij and Weber for the purpose of showing the annotator of applicant's claimed invention.

Applicant respectfully submits, however, that the combination of Vrij and Weber does not show or suggest using

an annotator to indicate the presence of a cluster of deceptive behaviors within a corporate disclosure, wherein the annotation includes each deceptive behavior and the number of deceptive behaviors within the cluster of deceptive behaviors. First, there is nothing in Weber that relates in any way to analysis of corporate disclosures to find deceptive behaviors of a representative. As a result, it is not obvious to combine Vrij and Weber to show the applicant's claimed invention. Second, even if Vrij and Weber are combined, the combination would still not show or suggest an annotation that includes each deceptive behavior and the number of deceptive behaviors within the cluster of deceptive behaviors.

E. Conclusion

For at least the reasons listed above neither Vrij nor Johnson nor Barboza nor Weber discloses or suggests all of the elements of applicant's independent claims 1 and 6. Further, the combination of features to which all of these references cumulatively contribute also falls short of applicant's claimed invention.

Accordingly, for at least the reasons listed above, applicant respectfully requests that the rejections of amended independent claims 1 and 6 under 35 U.S.C. §103(a) be withdrawn. Dependent claims 2-5 and 7-10 are also patentable at least because they depend from patentable independent claim 1. For at least this reason, applicant respectfully requests that the rejection of claims 2-5 and 7-10 under 35 U.S.C. § 103(a) also be withdrawn.

Applicant's Reply to the Examiner's Official Notice

In reference to dependent claim 8, the Examiner acknowledged that Vrij fails to teach collecting data beyond a predetermined time period (Office Action, page 9). However, the Examiner has taken Official Notice that such a feature is

well-known in the art, contending that "it is old and well known to continue data collection beyond a predetermined time interval to account for variability in the length of subject's latency period and length of response to a question, as well as to insure that the data collection process is comprehensive" (Office Action, page 9). Applicant respectfully traverses the Examiner's Official Notice.

The Examiner may only take Official Notice of facts outside of the record which are "capable of such instant and unquestionable demonstration as to defy dispute" (MPEP § 2144.03(A)). Applicant submits that although it may be old and well known to provide a flexible time frame for data collection when there is no predetermined time interval, as applicant submits is the case in Vrij, this is not the case in a method or system that specifically refers to a particular time-interval for data collection. Claim 1, as amended, sets such a time interval in order to determine which deceptive behaviors to include in a cluster. Claim 8 depends from claim 1 and, as amended, specifies the parameters for determining deceptive behaviors that occur after the specified time interval of claim 1 but are nonetheless linked to the deceptive behaviors already included in the cluster. A flexible time interval, arbitrarily extendable, would not provide the systematic approach to deceptive behavior detection nor the superior detection capabilities offered by clearly linking the deceptive behaviors to the stimulus, as provided by applicant's claimed invention. As such, applicant respectfully submits that it is not old and well known to continue data collection beyond a predetermined time interval in order to provide a complete data record, as the Examiner contends.

Therefore, applicants traverse the Official Notice because it is at least disputable whether the noticed concept of providing a flexible time frame for data collection is applicable when a particular time interval is specified. If

the Examiner maintains the rejection, applicants respectfully request that the Examiner provide a reference in support of the Official Notice (see MPEP § 2144.03(C)).

The New Claims

Applicant has added new claims 11-17 in order to more particularly define the invention. New claims 11-17 do not add new matter and are fully supported by the original specification. In addition, new claims 11-17 depend from either independent claim 1 or independent claim 6. For at least this reason, applicant respectfully submits that dependent claims 11-17 are also patentable.

Conclusion

For at least the reasons set forth above, applicants respectfully submit that this application, as amended, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested.

Respectfully submitted,

/Michael J. Chasan/

Michael J. Chasan
Reg. No. 54,026
Attorney for Applicants
ROPES & GRAY LLP
Customer No. 28120
One International Place
Boston, MA 02110
(617) 951-7000